

Title (en)

IMPROVED EXHAUST GAS HEATING APPARATUS AND METHOD OF HEATING

Title (de)

VERBESSERTE ABGASAUFWERKZEUGUNG UND VERFAHREN ZUM HEIZEN

Title (fr)

APPAREIL DE CHAUFFAGE DE GAZ D'ÉCHAPPEMENT PERFECTIONNÉ ET PROCÉDÉ DE CHAUFFAGE

Publication

EP 2935996 A1 20151028 (EN)

Application

EP 13815931 A 20131218

Priority

- US 201261738923 P 20121218
- US 201361888726 P 20131009
- US 2013076008 W 20131218

Abstract (en)

[origin: WO2014100118A1] A heating apparatus (1) and method for use in an exhaust gas system is provided that includes a container body (14) defining an exhaust gas pathway (30), a heater flange (20) component attached to an exterior of the container body (14), and a heater assembly disposed in the exhaust gas pathway (30) and secured to the heater flange (20) component. The heater assembly includes at least one heater element (35), a bracket assembly (40) that secures the at least one heater element (35) in the container body (14), and a conformal bracket for securing the at least one heater element (35) to the bracket assembly (40).

IPC 8 full level

F01N 13/00 (2010.01); **F23G 7/06** (2006.01); **F23J 15/08** (2006.01); **F24H 3/04** (2006.01)

CPC (source: EP US)

F01N 3/027 (2013.01 - EP US); **F01N 3/26** (2013.01 - US); **F01N 13/008** (2013.01 - EP US); **F23G 7/063** (2013.01 - EP US); **F23J 15/08** (2013.01 - EP US); **F24H 3/0405** (2013.01 - EP US); **F24H 9/1818** (2013.01 - EP US); **H05B 1/0236** (2013.01 - US); **H05B 3/44** (2013.01 - US); **F01N 2240/16** (2013.01 - EP US); **F01N 2560/06** (2013.01 - EP US); **F23G 2900/508** (2013.01 - EP US); **F24H 2250/02** (2013.01 - EP US)

Citation (search report)

See references of WO 2014100118A1

Cited by

EP3825528A1; DE102019121382A1; DE102019131556A1; US11492942B2; US11519312B2; US11486286B2; US11486285B2; EP3964696A1; DE102020123376A1; US11578632B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2014100118 A1 20140626; CA 2894700 A1 20140626; CA 2894700 C 20170314; CN 104969004 A 20151007; CN 104969004 B 20180629; CN 108729987 A 20181102; EP 2935996 A1 20151028; EP 2935996 B1 20190320; ES 2728255 T3 20191023; JP 2016503854 A 20160208; JP 6240682 B2 20171129; US 10801388 B2 20201013; US 2014190151 A1 20140710

DOCDB simple family (application)

US 2013076008 W 20131218; CA 2894700 A 20131218; CN 201380066584 A 20131218; CN 201810564669 A 20131218; EP 13815931 A 20131218; ES 13815931 T 20131218; JP 2015549607 A 20131218; US 201314132462 A 20131218